

# Coherence vs. Distributed Services for Learned Societies

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**Distributed**

**Readers**

**Sources**

**'infinite' Workforce**

**C  
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E  
N  
C  
E**

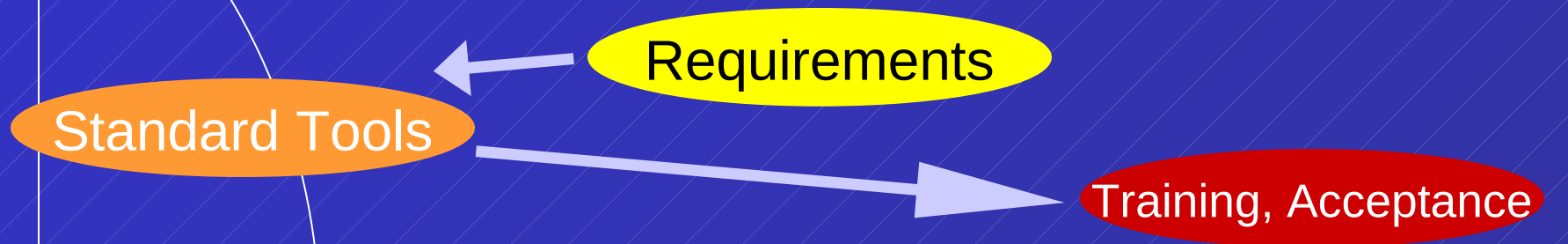
**Multiple**

**Learned Fields**

**Commities**

**National Societies**

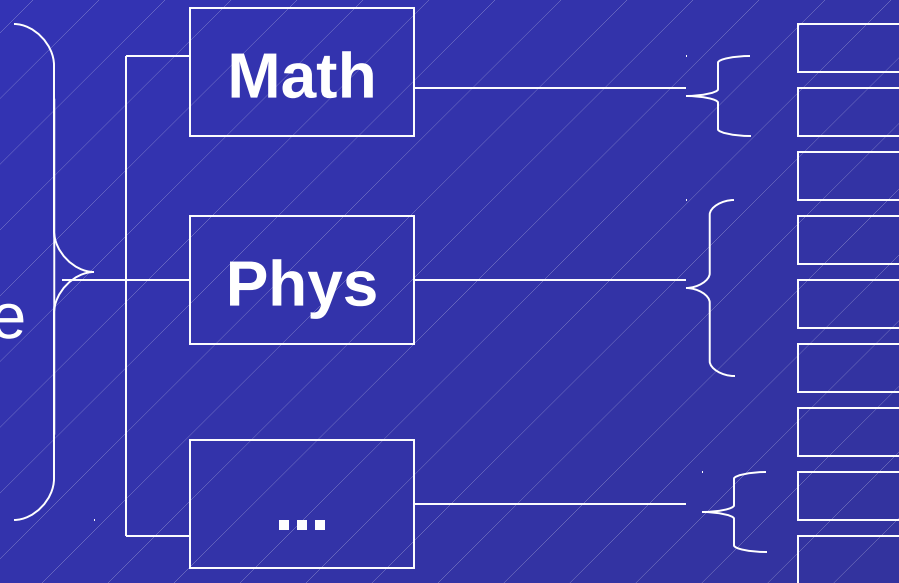
# Flow of cooperation needed:



## Committees

- W3C
- DC-Research
- OS-Research
- Santa Fe Initiative
- ProgCite
- ...

## Learned Fields



## National Societies



[IuK Home](#)
[Ziele](#)
[über die IuK](#)
[Projekte](#)
[Dokumente](#)
[Ansprechpartner](#)
[Mailinglisten](#)
[Mitglieder](#)
[Internationale Kontakte](#)
[Server der](#)
[Fachgesellschaften](#)
[Pressemitteilung](#)
[Veranstaltungen](#)


## Initiative Information und Kommunikation der wissenschaftlichen Fachgesellschaften in Deutschland

Die Ziele der IuK Initiative sind in der [Kooperationsvereinbarung](#) niedergelegt.

### Schwerpunkte der Aufgaben der IuK Initiative sind

- die Vertretung der Interessen der Wissenschaftler aller Fächer als Erzeuger und Nutzer wissenschaftlicher Informations- und Kommunikationssysteme gegenüber Institutionen und Anbietern von Dienstleistungen (Hochschulen, Bibliotheken, Bildungsadministrationen, Rechenzentren, Fachinformationszentren und kommerzielle Provider);
- die konzeptionelle Unterstützung der Planung und des Aufbaus leistungsfähiger Managementstrukturen für die Wissenschaft;
- die Erstellung von detaillierten Anforderungsprofilen für neue Dienste, Evaluierungen und Empfehlungen sowie die Erarbeitung von langfristigen Perspektiven für die Zukunft;
- die detaillierte Abstimmung und Planung der IuK-Aktivitäten der Fachgesellschaften untereinander zur Stärkung der Kohärenz zwischen den Fachwissenschaften und zur Ausschöpfung potentieller Synergien;
- die kompetente Beratung und Unterstützung der Wissenschaftler aller Fächer in IuK-Fragen;
- die weitere Verbreiterung der Basis der IuK (weitere Fachgesellschaften, Kooperation mit Forschungsinstitutionen (z.B. MPG), Instituten (u.a. der Helmholtz-Gesellschaft und der Wilhelm Leibniz-Gesellschaft) und thematisch orientierten Gesellschaften in Deutschland (z.B. DGD, ZKI, dbv);
- die qualifizierte aktive Mitarbeit und Kooperation in weiteren wichtigen internationalen Institutionen im IuK-Bereich (z.B. in den Standardisierungsgremien des Internets, wie dem W3C Consortium). Sie soll die IuK-Aktivitäten in die internationalen Entwicklungen einbetten.
- Initiativen zur Förderung der Nutzung von IuK durch die Wissenschaftler und zur Gestaltung einer zukunftsicheren effektiven Managementstruktur für die Wissenschaft zu initiieren und politisch gegenüber allen einschlägigen bundes- und landespolitischen Ebenen sowie den hochschulpolitischen Ebenen (z.B. HRK) sowie den Förderinstitutionen zu vertreten.



# Needs

## Learned Fields need:

### Standards:

- MetaData
  - DC
  - RDF
- XML
  - CML
  - MathML
  - RDF

### to share:

- services
  - information systems
  - qualifying systems
- tools
  - search engines
  - dynamic thesauri
  - crosslinking

# Types of Information

offline  
information

- ▣ Publications
  - ▣ PrePrints, Eprints
  - ▣ Articles, Reports
  - ▣ PhD-Theses

- ▣ Lecture Notes

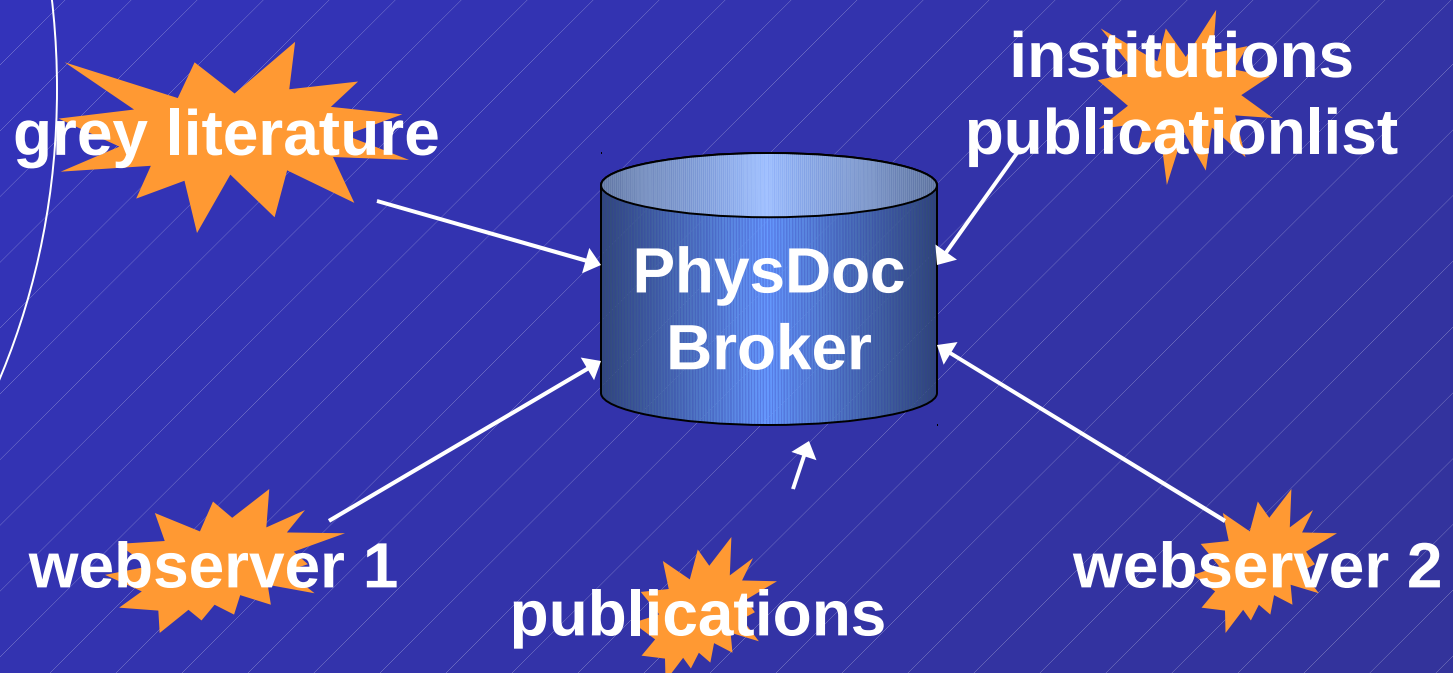
- ▣ Personal Information

- ▣ Departmental Information

- ▣ Discussion booths

...

# Distributed Sources vs. Coherent Retrieval



# PhysDep

# PhysDoc

Linklist + Seachengine  
approved by National Societies  
businessmodel

administrational inform.

distributed gatherers: 26

search depth: 2-full

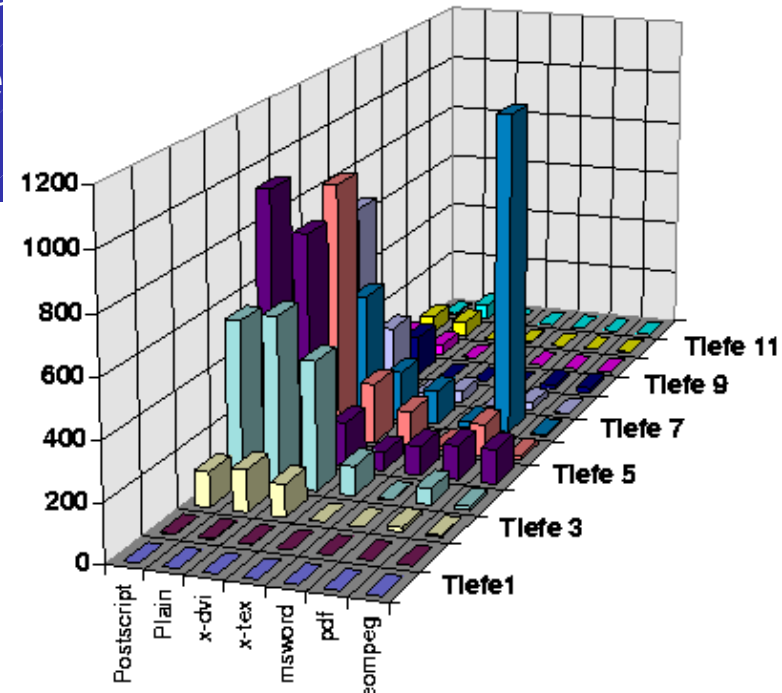
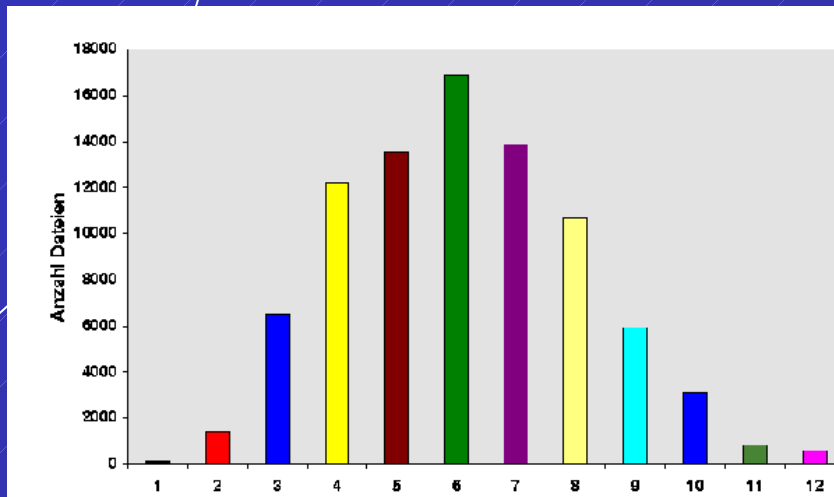
acceptance 500/day

publications

distributed gatherers: 2

search de

400/day





Netscape: PhysDoc – Worldwide Physics Documents Network

File Edit View Go Bookmarks Options Directory Window Help

Location: <http://www.physik.uni-oldenburg.de/EPS/PhysNet/physdoc.html>

**PhysNet**

**PhysDep**  
Physics Departments  
Worldwide

**PhysDoc**  
Physic Documents  
Worldwide

**MetaPhys**  
Physics Documents  
Meta Search Engine

**Journals**  
Free Physics related  
Journals Worldwide


**Conferences**  
Physics related  
Conferences etc.

**Uploadform**  
Register a new  
Department


**Services**  
Available Services on  
Physics & other Fields

*Carl v. Ossietzky*  
**UNIVERSITÄT  
OLDENBURG**  
Department of Physics

**PhysDoc**  
*Physics Documents Worldwide*



[\[Africa\]](#) [\[Asia\]](#) [\[Australia & Oceania\]](#) [\[Europe\]](#) [\[North America\]](#) [\[South America\]](#)



Separate Lists:  
[\[France\]](#) [\[Germany\]](#) [\[Ireland\]](#) [\[Italy\]](#) [\[UK\]](#) [\[USA\]](#)

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**If a Department or a Department's publication link is missing  
in the link-lists, please contact us via the [Upload-Interface](#).**

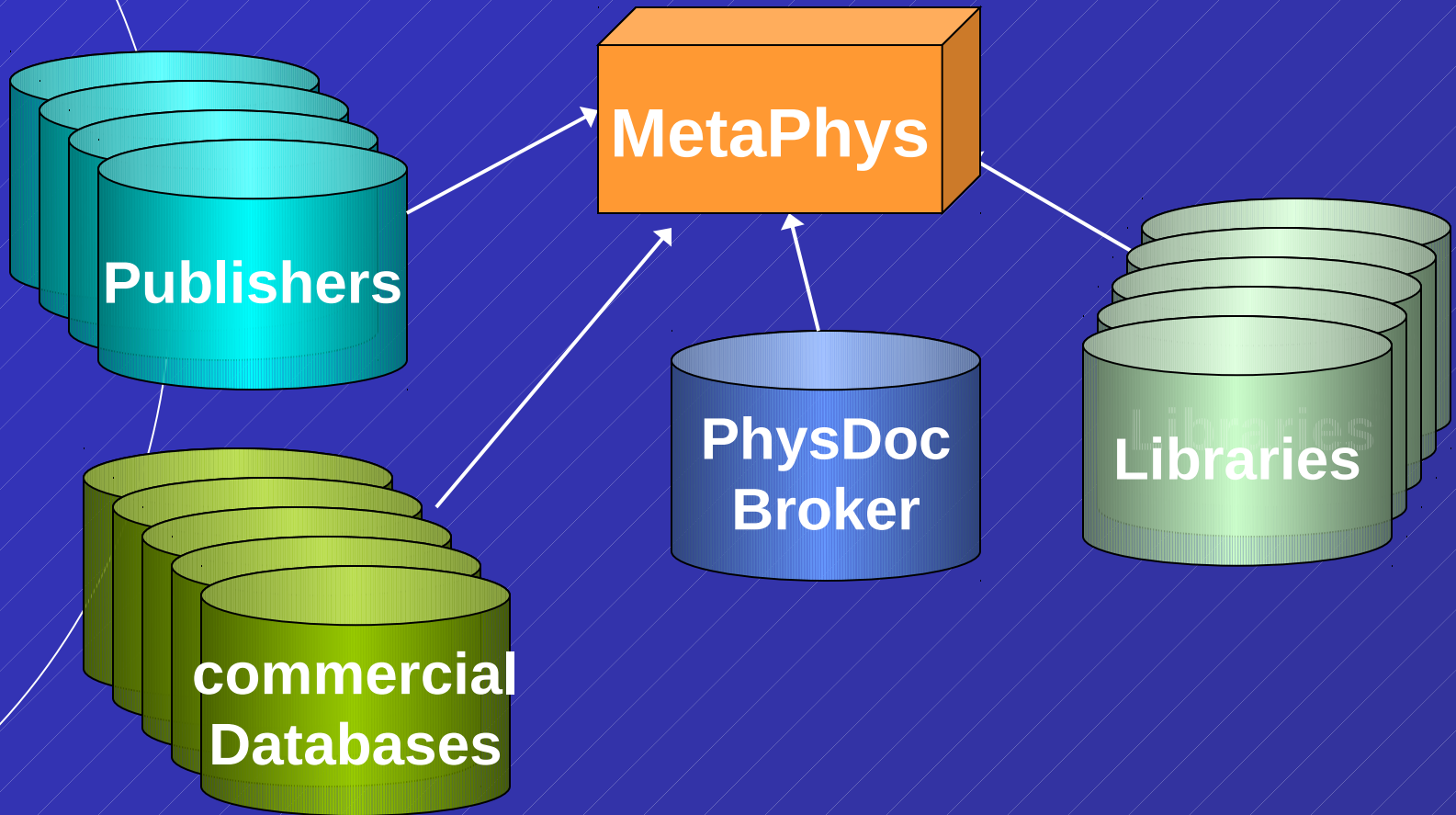
---

**Search** for distributed documents at European & US Physics Departments:

**One example:**  
**feynman quantum** – to find information on Feynman's publications in Quantum Mechanics.

Full Text <input type="checkbox"/>	<input type="text"/>
Author <input type="checkbox"/>	<input type="text"/>
Title <input type="checkbox"/>	<input type="text"/>

# Publications

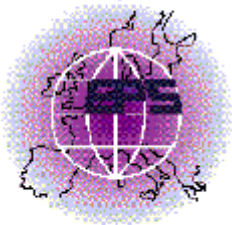


# MetaPhys

The Physics Document Meta Search Engine

Department of Physics

Sponsored by the [European Physical Society](#)



Please enter your search keywords !

Full Text

Search

Full Text

Timeout:

Full Text

90

seconds

## Database Select:

### Free full text servers:

- [Los Alamos e-Print archive](#)
- [APS Preprints \(American Physical Society\)](#)

### Distributed databases:

- [PhysDoc](#)

### Computer science centered databases:

- [MeDoc / InterDoc](#)

### Related Databases:

- [DEPATIS \(Deutsches Patentamt\)](#)

### Databases of commercial publishers:

- [Springer Online](#)
- [World Scientific](#)
- [Wiley](#)
- [Kluwer academic publishers](#)
- [Elsevier/ HBZ-Database](#)
- [IDEAL® LIBRARY \(Academic Press\)](#)
- [PNAS \(Proc. of Nat. Academy of Science\)](#)
- [Science](#)

[About MetaPhys](#)  
[Usage Statistics](#)  
[Other Services](#)

Metasearch has been developed by [Peter Borrmann](#), [Jens Harting](#) and [Claus Schroeter](#)  
Please report bugs to [Peter Borrmann and Jens Harting](#)

**MetaXChem**

is the Metasearch service  
for Chemistry developed by  
Claus Schroeter and located  
at [www.chemie.de](http://www.chemie.de)

# PhD-Theses

## Legal Aspects

- Online- and paper publishing parallel
- Discussion in DC.Rights
  - rights of the resource:  
(un-)restricted access / use
  - rights of the meta data



# Electronic theses in Europe

## Coverage:

■ solid

■ up to 10 sites per country

■ few sites

■ no sites

updated: August 1999

## Acceptance

## Business model

**Dissertationen**  
*Online*



## Upload:

- Starting point of workflow
- Dublin-Core MetaData
- Description from the author's view
- Rights contract

## Dissertationen (Ph.-D. theses) Information

Please type the bibliographic information into the form-interface. The information will be processed by the „Promotionsausschuß“.

**Author last name:**

**Author first name:**

**Author: middle names** (please write in full):

**Email** address of candidate or of his/her contact person:

**Original Title:**

**Subtitle:**

**Title** (translation of title to english):  
(if original title in english, then fill in here the german translation)

**Subtitle** (translation of subtitle to english):  
(if original subtitle in english, then fill in here the german translation)

**URL** of thesis (give the full data file name where the document is at present located):

# Free-access Journals

- ▣ AAO Newsletter (Newsletter of the Anglo-Australian Observatories)
- ▣ APEIRON Studies in Infinite Nature -- A peer-reviewed journal
- ▣ Brazilian Journal of Physics
- ▣ Complexity International
- ▣ Condensed Matter Physics
- ▣ Engineering and Laboratory Notes
- ▣ European Physical Journal - EPJ direct
- ▣ Fizika A (Zagreb), Fizika B (Zagreb)
- ▣ ICFA Instrumentation Bulletin
- ▣ Journal of High Energy Physics (JHEP)
- ▣ Journal of the Physical Society of Japan
- ▣ ...

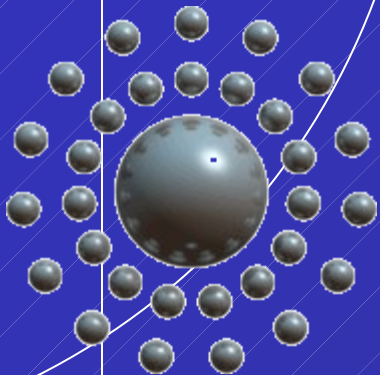
# Dublin-Core MetaData

Agreement on semantics for object-description

September 1998  
RFC 2413

Title  
Creator  
Subject  
Description  
Date  
Publisher  
Contributor  
Type

Format  
Identifier  
Relation  
Source  
Language  
Coverage  
Rights





# Author's tools

## My Meta Maker [\(1.31\)](#)

To markup Resources in Physics  
using the [Dublin-Core](#)-Standard

Where can the resource be found?  URL,  URN,  ISBN,  ISSN,  other

I

Classification with:  PACS,  MSC

Object-Type:

Misc

Data-Format:

ASCII-Text

Language:

English

Number of Authors:

1 Author

create META file

...

```
<HTML >
<HEAD >
<META NAME="keywords" CONTENT="pha
<!-- Dublin Core Metadata Package
<!-- by MyMetaMaker Version 1.31 -
<META NAME="DC.title" CONTENT="Cla
<META NAME="DC.creator" CONTENT="B
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<LINK REL="SCHEME.pacs96" HREF="ht
<LINK REL="SCHEME.msc91" HREF="htt
<LINK REL="SCHEME.Z39.53" HREF="ht
<!-- /Dublin Core Metadata Package
<TITLE>Classification of phase tra
```

# Doc. Management Systems

- Generation of MetaData
- Document-upload
- Digital Signatures
- RDF



Global-Info SFM CARMEN

Gefördert vom



**bmb+f**

Bundesministerium für  
Bildung und Forschung



Webbased-Upload-Form-1

This tool will help you to publish your documents in the WWW

**Metadata** , so search engines can easily find your documents

Hints for the usage of  **special characters**

**Personal data:**

If you have already used this tool, please enter your **Identity**:

Otherwise please enter your **Name**:

**Information about the document:**

▪ **Research group or institute** the document belongs to:

# Lecture Notes & Navigation Service

	Terms: 1	2	3	4	5 ...
Quantummechanics					*
Classical mechanics	*	*	*	*	
Electrodynamics		*	*		
Statistical mechanics				*	*
Acoustics	*	*	*	*	*
Optics		*	*	*	*
...					

# Personal Information

## Information Input

- ▣ Names
- ▣ Addresses
- ▣ Areas of research
- ▣ Memberships
- ▣ Publication lists

## Global service types

- ▣ Contact-information (Name, Address, Telephone, ...)
- ▣ Research information
- ▣ Legal Information



## Personal Homepages

- contain all needed information
  - names
  - links to publication lists
  - description of research-activities

## Advantages

- Information up to date
- rights stay with author

## Problems

- highly incoherent syntax
- personal layout
- highly dynamic information

## Solution

- Professional Homepages
  - Upload Form
  - Metadata
  - Global Search

www.physik.uni-oldenburg.de/EPS/PHP

Personal  
Homepage



Web-Form



Qualified  
Professional  
Homepage





Netscape: Creating your Professional-Homepage

File Edit View Go Bookmarks Options Directory Window

Location:

[Creating your Professional-Homepage](#)

Math  Nat.  **IuK**

Name (surname, first name):

Prof.  Dr.

E-Mail Address:

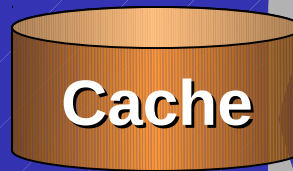
Postal Address:

Telephone Number:

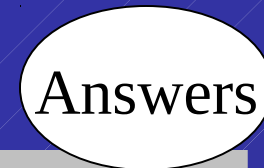
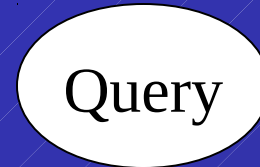
Fax:

PHP-qualified homepages

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Cache: Necessary to min. answering time  
Maximum caching time: 1 week



Links



# Future Services by the EPS

- Search for Experts on special topics
- Fieldspecific Knowledge Database
- Fieldspecific Alerting
- Distributed Membership Database



# Departmental Information

## Common Structure for Homepages

- Dublin-Core application
- Add-on Services:
  - Document-Servers
  - Lecture Notes
  - Address-Databases
  - Conference Services
  - ...

# Bridges Math-Phys

- Joint technical cooperation
- W3C, DC-Research
- Joint agreement on standards
- Sharing of technical solutions
- Joint agreement on standards
- Joint representation
- Joint local training
- see you in Oldenburg

***hilfe@merlin.physik.uni-oldenburg.de***

The Future of Mathematical Communication 1999

Berkeley, California, December 1-5, 1999